

STANDARDS ALERT

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Standards Development Opportunity: **Fine Bubble Technology**

In this edition of Standards Alert, the Office of Standards and Investment Policy (OSIP) Standards Team and the American National Standards Institute (ANSI) are flagging an opportunity to become involved in developing international standards in the emerging area of fine bubble technology through the newly formed ISO Technical Committee on Fine Bubble Technology (TC 281). Japan proposed this new standards work in 2013, but to date TC 281 has not submitted draft standards, allowing those interested in becoming involved to still join early in the standards development process. A U.S. Technical Advisory Group, which will represent the United States in this work, is now forming and more information can be obtained from ANSI.

Fine bubbles are small, but their impact is large and they have the potential to influence production methods for a diverse range of products-- from household cleaning products, pharmaceuticals, healthcare technologies, to semi-conductors, and environmental remediation and agricultural products. There's even a chance you ate some for lunch with your low-calorie mayonnaise. Fine bubbles are artificially created and typically measure less than 100 micrometers; ultrafine bubbles measure less than one micrometer, or the wavelength of light.

Companies interested in becoming involved in this work should contact ANSI's Steve Cornish at SCornish@ansi.org as soon as possible. Or contact ITA's Office of Standards and Investment Policy at michael.boyles@trade.gov.

Fine bubble technologies have the potential to affect many sectors and ITA's Industry Analysts are important resources for companies interested in learning more about how they may tie into their products or services. Interested companies may reach out to: Maureen Hinman, Office of Energy & Environmental Industries, maureen.hinman@trade.gov for water technologies, Victoria Kao, Office of Consumer Goods, victoria.kao@trade.gov for consumer products and processed food, or Farah Naim, Office of Material Industries, farah.naim@trade.gov, for healthcare and pharmaceuticals. If your industry sector is not included, please reach out to a member of the OSIP Standards Team and we will put you in contact with the applicable analyst.

Key Excerpts from the Scope Statement: Standardization of terms and definitions, classifications in sizes and characteristics, and other aspects related to measurements, functions and applications in the field of "fine bubbles." According to known behavior of fine bubbles, there are so-called "ultrafine bubbles" which should be defined differently. The new TC deals with both "fine bubbles" and "ultrafine bubbles."

The proposer plans to use a three-layer standards system for standardization of fine bubble technology. The three-layer standards system in this case consists of (1) terms and definition at the top, (2) measurement methods at the middle, and (3) other aspects related to functions and specific industrial applications at the bottom. The three-layer standards system is considered to be effective for a systematic standardization of new technology.

1. Basics
 - Terms and definitions
 - Classifications in sizes and characteristics
2. Measurement methods
 - Laser diffraction scattering method
 - Dynamic light scattering method
 - Electrical sensing zone method
 - Particle tracking analysis method (Brownian motion tracking analysis method)
 - Resonance mass measurement method
 - Zeta-potential measurement method (Particle tracking/Dynamic light scattering)
 - Other candidate methods if proposed.
3. Functions Applicable to Industry
 - Cleaning Effect
 - Separation Effect
 - Lubrication Effect
 - Electrostatic Charge Separation Effect
 - Control Effect of Physical Properties (Density, Diffusivity, etc.)
 - Other candidates functions if proposed

Priorities are given to the items listed in the top and middle layers over the others those listed in the bottom layer for the reason that the definition and measurement methods are essential to develop the standards of related applications that provide technical solutions for users.

I&A OSIP Standards Team

Eileen Hill
Standards Team Lead
Eileen.Hill@trade.gov
202-482-5276

Renee Hancher
Lead, Standards Policy
and Negotiations
Renee.Hancher@trade.gov
202-482-3493

Mike Boyles
Emerging Issues Manager
Michael.Boyles@trade.gov
202-482-1935



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About Standards Alert

Standards Alert is a new service from the ITA Industry and Analysis's Office of Standards and Investment Policy (OSIP) in cooperation with the American National Standards Institute (ANSI), the private sector coordinator of the U.S. Standards system to ensure ITA clients know about opportunities to participate in standards development.

To facilitate company participation, OSIP and ANSI are happy to provide information on how to get involved. For background, the following link provides an overview of the U.S. standardization system and how it relates to international standards development http://www.ansi.org/standards_activities/overview/overview.aspx.

Have an idea for a future edition of *Standards Alert*. Contact Mike Boyles at 202-482-1935 (Michael.Boyles@trade.gov).